AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-39. (cancelled)

40. (new) A method for preparing a specific recombinant protein, said method being carried out by overexpression of a gene encoding for a specific recombinant protein in a monokaryotic strain of filamentous fungi of the species Pycnoporus of the basidiomycete group, comprising:

(a) a stage of culturing the abovementioned monokaryotic strain of Pycnoporus, said strain being transformed using an expression vector containing a gene encoding for a specific recombinant protein, the expression of which is placed under the control of a promoter corresponding to an endogenous promoter of the abovementioned fungi, or of a exogenous promoter~~+~~, said promoter being constitutive or inducible,

(b) a stage of induction of the abovementioned promoter, when the latter is inducible, and

(c) recovering and purifying of the specific recombinant protein, produced in the culture medium.

41. (new) The method according to claim 40, wherein the monokaryotic strain of Pycnoporus used is a strain of Pycnoporus cinnabarinus.

42. (new) The method according to claim 40, wherein the specific recombinant proteins overexpressed correspond to endogenous proteins of Pycnoporus, or to exogenous proteinsor

corresponding to endogenous proteins of strains of Pycnoporus different from the strain of Pycnoporus used for the production of said proteins.

43. (new) The method according to claim 40, wherein the specific recombinant proteins correspond:

(a) to the following endogenous proteins of Pycnoporus:

(i) the metalloenzymes, or

(ii) cellobiose dehydrogenase, xylanase, β-glycosidase, invertase, or α-amylase, or

(b) to the exogenous proteins selected from the group consisting of:

(i) tyrosinases of strains of Pycnoporus different from the strain of Pycnoporus used for the production of said proteins,

(ii) laccases of basidiomycetes other than Pycnoporus, and

(iii) cinnamoyl esterases A and B of Aspergillus niger.

44. (new) The method according to claim 40, wherein

specific recombinant proteins corresponding to the endogenous proteins of Pycnoporus are prepared, and

the monokaryotic strain of Pycnoporus used is deficient in the gene encoding for the endogenous protein to which the specific recombinant protein corresponds.

45. (new) The method according to claim 40, wherein,

specific recombinant proteins corresponding to the endogenous proteins of Pycnoporus are prepared, and

the monokaryotic strain of Pycnoporus used is transformed using an expression vector containing the gene encoding for the specific recombinant protein labelled in particular by a histidine label.

46. (new) The method according to claim 40, wherein, recombinant laccases corresponding to the endogenous laccases of Pycnoporus are prepared, and the method comprises:

(a) a stage of culturing a monokaryotic strain of Pycnoporus deficient in the gene encoding for the endogenous laccase of Pycnoporus transformed using an expression vector containing the gene encoding for a laccase of Pycnoporus, and the expression of which is placed under the control of a promoter corresponding to the endogenous promoter of this laccase,

(b) a stage of induction of the abovementioned promoter, in particular by adding ethanol, or agricultural by-products containing lignocellulose or compounds with an aromatic ring, and

(c) recovering and purifying of the recombinant laccase, corresponding to the abovementioned endogenous laccase of Pycnoporus produced in the culture medium.

47. (new) The method according to claim 46, wherein, recombinant laccase corresponding to the endogenous laccase of Pycnoporus cinnabarinus represented by SEQ ID NO: 2 are prepared, and the method comprises:

(a) a stage of culturing a monokaryotic strain of Pycnoporus cinnabarinus deficient in the gene encoding for the endogenous laccase of Pycnoporus cinnabarinus, transformed using an expression vector containing the nucleotide sequence SEQ ID NO: 1 encoding for the recombinant laccase represented by SEQ ID NO: 2and the expression of which is placed under the control of the pLac promoter corresponding to the endogenous promoter of the abovementioned laccase, the sequence of said pLac promoter being represented by SEQ ID NO: 3,

(b) a stage of induction by ethanol of the abovementioned pLac promoter, and

(c) the recovery, and the purification of the recombinant laccase, represented by SEQ ID NO: 2 produced in the culture medium.

48. (new) The method according to claim 40, wherein recombinant laccases corresponding to the endogenous laccases of Pycnoporus are prepared and the method comprises:

(a) a stage of culturing a monokaryotic strain of Pycnoporus deficient in the gene encoding for the endogenous laccase of Pycnoporus, transformed using an expression vector containing the gene encoding for a laccase of Pycnoporus, the expression of which is placed under the control of an exogenous promoter selected from:

(i) the gpd promoter of the expression of the gene encoding for the glyceraldehyde 3-phosphate dehydrogenase of Schizophyllum commune, the nucleotide sequence of which is represented by SEQ ID NO: 4, or

(ii) the sc3 promoter of the expression of the gene encoding for the hydrophobin of Schizophyllum commune, the nucleotide sequence of which is represented by SEQ ID NO: 5, and

(c) recovering and purifying the recombinant laccase, corresponding to the endogenous laccase of Pycnoporus produced in the culture medium.

49. (new) The method according to claim 48, wherein the recombinant laccase corresponding to the endogenous laccase of Pycnoporus cinnabarinus represented by SEQ ID NO: 2 is prepared and the method comprises:

(a) a stage of culturing a monokaryotic strain of Pycnoporus cinnabarinus deficient in the gene encoding for the endogenous laccase of Pycnoporus, transformed using an expression vector containing the nucleotide sequence SEQ ID NO: 1 encoding for the recombinant laccase represented by SEQ ID NO: 2, and the

expression of which is placed under the control of the exogenous gpd or sc3 promoter, and

(b) recovering and purifying the recombinant laccase, represented by SEQ ID NO: 2 produced in the culture medium.

50. (new) The method according to claim 40, wherein recombinant tyrosinase corresponding to the tyrosinase of Pycnoporus sanguineus represented by SEQ ID NO: 16 are prepared, and the method comprises:

(a) a stage of culturing a monokaryotic strain of Pycnoporus cinnabarinus transformed using an expression vector containing the nucleotide sequence SEQ ID NO: 15 encoding for the recombinant tyrosinase represented by SEQ ID NO: 16, the sequence SEQ ID NO: 15 being advantageously preceded by the nucleotide sequence the first 21 amino acids, which is the peptide signal, of SEQ ID NO: 2, and the expression of which is placed under the control of the pLac promoter corresponding to the endogenous promoter of the laccase of Pycnoporus cinnabarinus, the sequence of said pLac promoter being represented by SEQ ID NO: 3,

(b) a stage of induction by ethanol of the abovementioned pLac promoter, and

(c) recovering and purifying the recombinant tyrosinase, represented by SEQ ID NO: 16 produced in the culture medium.

51. (new) The method according to claim 40, wherein recombinant laccase corresponding to the laccase of halocyphina villosa represented by the sequence SEQ ID NO: 18 is prepared and the method comprises:

(a) a stage of culturing a monokaryotic strain of Pycnoporus cinnabarinus deficient in the gene encoding for the endogenous laccase of Pycnoporus cinnabarinus, transformed using an expression vector containing the nucleotide sequence

represented by the sequence SEQ ID NO: 17~~)~~ encoding for the recombinant laccase represented by SEQ ID NO: 18, and the expression of which is placed under the control of the pLac promoter corresponding to the endogenous promoter of the laccase of Pycnoporus cinnabarinus, the sequence of said pLac promoter being represented by SEQ ID NO: 3,

(b) a stage of induction by ethanol of the abovementioned pLac promoter, and

(c) recovering and purifying of the recombinant laccase, represented by SEQ ID NO: 18 produced in the culture medium.

52. (withdrawn-new) Nucleotide sequence encoding for the pLac promoter of the endogenous laccase of Pycnoporus cinnabarinus, and corresponding to the sequence SEQ ID NO: 3, or any sequence derived from this promoter by substitution, addition or suppression of one or more nucleotides and retaining the property of being a promoter of the expression of sequences.

53.(withdrawn-new) Expression vector characterized in that it comprises the sequence SEQ ID NO: 3 encoding for the pLac promoter of the endogenous laccase of Pycnoporus cinnabarinus.

54 (withdrawn-new) Expression vector according to claim 53, characterized in that it comprises a gene encoding for a specific recombinant protein, and the expression of which is placed under the control of the pLac promoter.

55. (withdrawn-new) Expression vector according to claim 54, characterized in that the specific recombinant protein is a protein corresponding: to the following endogenous proteins of Pycnoporus: the metalloenzymes, such as laccase, or tyrosinase, or cellobiose dehydrogenase, xylanase, .beta.-

glycosidase, invertase, or .alpha.-amylase, to the exogenous proteins chosen from the following: the tyrosinases of strains of Pycnoporus different from the strain of Pycnoporus used for the production of said proteins, such as the tyrosinase of Pycnoporus sanguineus when the strain of Pycnoporus used for the production of this tyrosinase is different from Pycnoporus sanguineus, the laccases of basidiomycetes other than Pycnoporus, such as the laccase of halocyphina villosa (halophilic basidiomycete),the cinnamoyl esterases A and B of Aspergillus niger.

56. (withdrawn-new) Host cell transformed using an expression vector according to claim 54.

57. (withdrawn-new) Host cell according to claim 56, corresponding to monokaryotic cells of strains of Pycnoporus, such as strains of Pycnoporus cinnabarinus.

58. (new) The method according to claim 43, wherein the metalloenzymes are chosen from laccase or tyrosinase.

59. (new) The method according to claim 43, wherein the tyrosinases of strains of Pycnoporus different from the strain of Pycnoporus used for the production of said proteins, is the tyrosinase of Pycnoporus sanguineus.

60. (new) The method according to claim 43, wherein the laccases of basidiomycetes other that pycnoporus is the laccase of *halocyphina villosa*.

61. (new) The method according to claim 46, wherein the lignocellulose is selected from the group consisting of wheat straw, corn bran and beet pulp.

62. (new) The method according to claim 46, wherein the compounds with an aromatic ring is selected from the group consisting of 2,5-xylidine, veratrylic acid, guaicol, veratrylic alcohol, syringaldazine, ferulic acid, caffeic acid and the lignosulphonates.